

AMENDMENTS TO THE CLAIMS

Claim 1 (original) A power distribution system comprising:

(a) a power distribution block including a plurality of conduction paths having two opposite ends; and

(b) a plurality of connectors of a plurality of types;

wherein the power distribution block and connectors are configured such that connectors of any of the types can be removably coupled to at least one of the conduction paths at either end thereof.

Claim 2 (original) The system of claim 1 wherein each end of each conduction path can be connected both electrically and mechanically to no more than one connector.

Claim 3 (original) The system of claim 1 wherein the conduction paths are disposed substantially parallel to each other.

Claim 4 (original) The system of claim 1 wherein the plurality of connectors includes more connectors than can be simultaneously coupled to the conduction paths.

Claim 5 (original) The system of claim 1 wherein each connector of a first type includes a plurality of mating interfaces, and wherein:

(a) the mating interfaces are couplable to a plurality of respective ends of adjacent conduction paths; and

(b) the mating interfaces are coupled together within each respective connector.

Claim 6 (original) The system of claim 5 wherein each connector of a second type has a single mating interface.

Claim 7 (original) The system of claim 1 wherein:

(a) each connector of a first type includes one or more mating interfaces that are couplable to cable having a circular cross section; and

(b) each connector of a second type includes one or more mating interfaces that are couplable to cable having a non-circular cross section.

Claim 8 (original) The system of claim 1 wherein the power is transmitted with electrical current and the power distribution block includes a plurality of electrical conductors.

Claim 9 (previously amended) The system of claim 1 further comprising a plurality of fuses, wherein at least one of the electrical conductors is interrupted by fuses that are interconnected in parallel.

Claim 10 (original) The system of claim 1 further comprising a packaging shell, the shell including recesses configured to house the power distribution block and the plurality of connectors, respectively.

Claim 11 (original) A method for configuring the transmission of power between a plurality of connectors, the method comprising:

- (a) providing a power distribution block including a plurality of conduction paths disposed substantially parallel to each other, each conduction path having a respective first end and a second, opposite end;
- (b) providing a plurality of removable connectors of a plurality of types; and
- (c) selecting two or more connectors from the plurality and coupling the selected connectors to one or more of the conduction paths at the ends thereof such that at least one of the conduction paths has a different type of connector at each of its opposite ends.

Claim 12 (original) The method of claim 11 wherein the plurality of connectors includes more connectors than can be simultaneously coupled to the conduction paths.

Claim 13 (original) The method of claim 11 wherein each connector of the first type includes a plurality of mating interfaces coupled together within the connector, the method further comprising coupling the mating interfaces to a plurality of first ends of adjacent conduction paths.

Claim 14 (original) The method of claim 13 wherein each connector of the second type has a single mating interface, the method further comprising coupling the mating interfaces of a plurality of connectors of the second type to second ends of the adjacent conduction paths.

Claim 15 (original) The method of claim 11 wherein:

- (a) each connector of the first type includes one or more mating interfaces that are couplable to cable having a substantially circular cross section; and
- (b) each connector of the second type includes one or more mating interfaces that are couplable to cable having a non-circular cross section.

Claim 16 (original) The method of claim 11 wherein the power is transmitted with electrical current and the power distribution block includes a plurality of electrical conductors.

Claim 17 (previously amended) The method of claim 16 further comprising interrupting at least one of the electrical conductors by multiple fuses interconnected in parallel.

Claim 18 (original) Apparatus for interconnecting a plurality of parallel fuses, the apparatus comprising:

- (a) a column of fuse receptacles, each of the receptacles including first and second terminals;
- (b) a first electrical conductor coupling together the first terminals of the receptacles and leading from a first end of the column of fuse receptacles; and

(c) a second electrical conductor substantially parallel in orientation with the first electrical conductor, the second electrical conductor coupling together the second terminals of the receptacles and leading from a second end, opposite the first end, of the column of fuse receptacles.

Claim 19 (original) The apparatus of claim further comprising:

(a) a second column of fuse receptacles that each include third and fourth terminals;

(b) a third electrical conductor coupling together the third terminals of the receptacles and leading from a first end of the second column of fuse receptacles; and

(c) a fourth electrical conductor substantially parallel in orientation with the third electrical conductor, the fourth electrical conductor coupling together the fourth terminals of the receptacles and leading from a second end, opposite the first end, of the second column of fuse receptacles.

Claim 20 (original) The apparatus of claim 19 further comprising first and second arrays of mating interfaces, wherein:

(a) each mating interface in the first array is coupled to an electrical conductor of a first plurality that includes the first and third electrical conductors;

(b) each mating interface in the second array is coupled to an electrical conductor of a second plurality that includes the second and fourth electrical conductors; and

(c) the first and second arrays are disposed at opposite ends of the matrix of fuse receptacles.

Claim 21 (original) The apparatus of claim 18 wherein the fuse receptacles are oriented substantially parallel to each other.

Claim 22 (original) The apparatus of claim wherein:

(a) the fuse receptacles are formed as recesses in a block of rigid, substantially non-conductive material; and

(b) the first and second terminals for each respective fuse receptacle are at opposite ends of a respective recess.

Claim 23 (original) The apparatus of claim 18 wherein the fuse receptacles are configured to receive automotive fuses.

Claim 24 (cancelled)

Claim 25 (original) Apparatus for fusing a plurality of electrical conduction paths, the apparatus comprising:

(a) a matrix of fuse receptacles having a plurality of columns and a plurality of rows, each receptacle having first and second terminals;

(b) a first plurality of electrical conductors coupling together the first terminals of the receptacles in each column; and

(c) a second plurality of electrical conductors coupling together the second terminals of the receptacles in each column;

whereby the fuse receptacles in each column are electrically connected in parallel.

Claim 26 (previously amended) The apparatus of claim 25 further comprising first and second arrays of mating interfaces, wherein:

13 (a) each mating interface in the first array is coupled to an electrical conductor of the first plurality of electrical conductors;

(b) each mating interface in the second array is coupled to an electrical conductor of the second plurality of electrical conductors; and

(c) the first and second arrays are disposed at opposite ends of the matrix of fuse receptacles.

Claim 27 (original) The apparatus of claim 25 wherein the fuse receptacles are oriented substantially parallel to each other.

Claim 28 (original) The apparatus of claim 25 wherein:

(a) the fuse receptacles are formed as recesses in a block of rigid, substantially non-conductive material; and

(b) the first and second terminals for each respective fuse receptacle are at opposite ends of a respective recess.

Claim 29 (original)

Claim 30 (previously amended) An electrical connector comprising:

- (a) a first portion fabricated from conductive material and including a substantially circular first aperture; and
- (b) a second portion molded from nonconductive material and including a substantially rectangular second aperture that is larger in area than the first aperture;

wherein

- (c) the first and second portions are arranged such that the first and second apertures are substantially coaxial.

Claim 31 (original) The connector of claim 30 wherein the first and second apertures are dimensioned to receive a selected type of insulated electrical cable of standard cross-sectional dimensions, the insulated electrical cable including a plurality of conductive wire strands and an insulated portion surrounding the wire strands, wherein:

- (a) the first portion of the connector is dimensioned to receive the plurality of wire strands; and
- (b) the second portion of the connector is dimensioned to receive the insulated electrical cable including the wire strands.

β' Claim 32 (previously added) The method of claim 11 further packaging the power distribution block and the plurality of connectors in a packaging shell that includes recesses configured to house the power distribution block and the plurality of connectors, respectively.
